

Civil Aviation Administration of China (CAAC)

Aircraft Evaluation Group (AEG)

Aircraft Evaluation Report

For

EC175 Series (EC 175B)

Initial Issue

Date: January 31, 2024

Manufacturer: Airbus Helicopters

Revision Record & Approval

No.	Section	Highlight	Date	Prepare	Review	Approve
Initial	All	Initial Evaluation for EC 175B.	January 31, 2024	LI Xiao lei	XUE Shi Jun	HAN Guang Zu

Prepared by:

LI Xiao Lei

Chief of Maintenance, Aircraft Evaluation Center, Civil Aviation Safety and Technology Center of Civil Aviation Administration of China

Reviewed by:

Els-

XUE Shi Jun Deputy Director General, Flight Standards Department of Civil Aviation Administration of China

Approved by:

赵忆

HAN Guang Zu

Director General

Flight Standards Department of Civil Aviation Administration of China

Table of Contents

REVISION RECORD & APPROVAL	1
TABLE OF CONTENTS	2
FOREWORD	4
SECTION 1: OPERATIONAL INFORMATION RELATED TO AIRCRAFT TYPE DESIGN	5
1.1 STATEMENT AND EXPLANATION:	5
1.2 EC175B	6
(1) General Information	6
(2) Kind of Operation	6
(3) Communication, Navigation and Surveillance	7
(4) Recording Equipment	7
SECTION 2: PILOT QUALIFICATION SPECIFICATION	8
2.1 Statement and Explanation	8
2.2 PILOT TYPE RATING AND LICENCE ENDORSEMENT	8
2.3 ODR AND MDR	8
2.4 SPECIFICATION FOR TRAINING	9
2.5 SPECIFICATION FOR CHECKING	9
2.6 SPECIFICATION FOR CURRENCY	9
2.7 SPECIFICATION FOR FLIGHT SIMULATION TRAINING DEVICES	9
SECTION 3: MAINTENANCE PERSONNEL QUALIFICATION SPECIFICATION	10
3.1 Statement and Explanation	10
3.2 Maintenance Personnel License Endorsement	10
3.3 Specification for Training	10
SECTION 4: MASTER MINIMUM EQUIPMENT LIST	12
4.1 Statement and Explanation	
4.2 CAAC SUPPLEMENTAL	
SECTION 5: SCHEDULED MAINTENANCE REQUIREMENTS	13
5.1 Statement and Expl anation	
5.2 CAAC SUPPLEMENTAL	
SECTION 6: OPERATIONAL AND CONTINUED AIRWORTHINESS INSTRUCTIONS	
6.1 Statement and Expl anation.	14
6.21 ist of Operational and Continued Airworthings Instructions	14
0.2 LIST OF OF ERATIONAL AND CONTINUED AIRWORTHINESS INSTRUCTIONS	13

SECTION 7: OTHER EVALUATION ITEMS	
7.1 Forward Observer Seat	
7.2 FLIGHT CREW SLEEPING QUARTERS	
7.3 Electronic Flight Bag	
7.4 Emergency Evacuation Demonstration	
SECTION 8: OEM PRODUCT SUPPORT INFORMATION	
8.1 Flight Training	
8.2 MAINTENANCE TRAINING	
8.3 TECHNICAL PUBLICATION	
8.4 MAINTENANCE SUPPORT	
APPENDIX: CAAC AEG TEAM AND POINT OF CONTACT	
A: CAAC AEG TEAM FOR INITIAL EVALUATION	
B: AIRBUS HELICOPTERS POINT OF CONTACT	

Aircraft Evaluation Report for EC175 Series

Foreword

Airbus Helicopters (AH) EC175 series helicopters include following models under the same TC:

- EC175 B

Notes:

- 1. The H175 is commercial name for EC175.
- 2. "MOT" is used for specific configuration chosen by EC175's first Chinese customer.

The EC175 is certificated as a Large Rotorcraft, Category A and B by EASA in 2014 firstly. CAAC initial validated certification is completed in 2023.

The EC175 is equipped with a Spheriflex type five bladed main rotor, Spheriflex type three bladed tail rotor, integrated avionics Helionix suite, digital basic 4-axis AFCS, electrically powered retractable landing gear, and two Pratt & Whitney PT6C-67E engines with FADEC.

The EC175 is 7 tons class multi-mission transport helicopters and approved for VFR and IFR operations, day and night, in non-icing conditions,

CAAC AEG initial evaluation for EC175 series was conducted on Model EC175 B in 2023 and the initial issue of this report is finalized based on the conclusions of the initial evaluation.

Section 1: Operational Information Related to Aircraft Type Design

1.1 Statement and Explanation:

This section includes the operation related information for EC175 mainly based on the following documents issued or approved by EASA and validated by CAAC:

- EASA Type Certificate Data Sheet (TCDS) R.150, Issue 10.
- EC175 Rotorcraft Flight Manual: Edition 2 RN 14, with CAAC appendix APP.1.5 CAAC RN0 23-03

The information is provided as an aid to support operation approval but should not be considered operation approval. If operator is required to show compliance, it remains the responsibility of the Principal Inspector (PI) for operator to approve the appropriate operation.

When the aircraft configuration differs from the above stated airworthiness approval, it is the responsibility of the operator and its Principal Inspector (PI) to evaluate those differences and develop the compliance to the relevant requirements.

1.2 EC175B

(1) General Information

Item	Type Related Information	
1.1 Category	Large Rotorcraft,	Category A and B
1.2 Dimensions	Fuselage	Length: 15.68 m
		Width: 3.35 m
		Height: 4.84 m
	Main Rotor	Diameter: 14.80 m
	Tail Rotor	Diameter: 3.20 m
1.3 Engines	2 Pratt & Whitney	Canada (PWC) PT6C-67E turboshaft engine
1.4 APU	N/A	
1.5 Propellers	N/A	
1.6 Maximum Operating	Category A: from	-1 500 ft Hp up to +13 000 ft Hσ
Altitude	Category B: from	-1 500 ft Hp up to +13 000 ft Hσ
	For flight: from –	1 500 ft Hp to +15 000 ft Hσ
1.7 Approach category	А	
1.8 Maximum Certified	Max gross mass in-flight: 7 500 kg	
Weights Max gross mass on-groun		n-ground: 7 550 kg
	Max gross mass in	n-flight: 7 800 kg (for EC175 B equipped with
	Helionix Step 2+,	see EASA TCDS)
	Max gross mass of	n-ground: 7 850 kg, (for EC175 B equipped with
	Helionix Step 2+,	see EASA TCDS)
1.9 Minimum Flight Crew	VFR: 1 pilot (righ	t seat)
	IFR: 2 pilots, or, 1	pilot under conditions and limitations included in
	the Supplement 6	of the RFM (specific to aircraft equipped with MOD
	99A05684-00)	
1.10 Maximum Occupants	up to 18	
1.11 Baggage/ Cargo	Cargo floor max le	oad: 300 kg Cargo floor max unit load: 160 kg/m ²
Compartment	See approved RFM	A for complementary limitations and specific loading
	conditions.	
1.12 Serial Numbers	ALL	
Eligibility		

(2) Kind of Operation

Item	Information	
2.1 Visual Flight Rules (VFR)	Approved as basic type design. VFR is for single pilot operation	
	(light seat)	
2.2 Instrument Flight Rules	Approved as basic type design. IFR is for 2 pilots operation, or, 1 pilot	
(IFR)	under conditions and limitations included in the Supplement 6 of the	
	RFM (specific to aircraft equipped with MOD 99A05684-00)	

Item	Information
2.3 Night and over-the-top	Approved as basic type design. The helicopter is approved for day and
	night VFR and for IFR operation.
2.4 Icing conditions	Flight in icing conditions is prohibited. Flight in falling and/or blowing
	snow also is prohibited.
2.5 Extended Overwater	Certified providing that the aircraft is equipped with the following
Operation	optional systems: Emergency Floatation System and Emergency Life
	Raft System as described SUP 14, and the Helicopter emergency
	egress lightning.
	It is on the operator responsibility to provide the approved life
	preservers and associated localization markings and the approved
	survival type Emergency Locator Transmitter (ELT)
2.6 Extended Range Operation	Not approved

Aircraft Evaluation Report for EC175 Series

(3) Communication, Navigation and Surveillance

Item	Information	
3.1 ATC transponder	One ATC (transponder TDR94D with Mode A / C / S (ELS &	
	EHS)) transponder (mode A, C and S installed) as standard.	
3.2 Data Link Communication	Data Transfer Device	
3.3 Satellite Communication	Equipped (Skytrac or SkyConnec)	
(SATCOM)		
3.4 RVSM	Not approved	
3.5 Performance Based	KLN 90B to perform Basic RNAV (B-RNAV) operations	
Navigation		
3.6 Low visibility operation	Night vision imaging system (NVIS) RFM SUP 41.	
3.7 Weather radar	Equipped with Weather Radar	
3.8 Terrain awareness and	HTAWS see RFM SUP 31	
warning system (TAWS)		
3.9 Traffic Alert and Collision	ACASII see RFM SUP 34	
Avoidance equipment		
3.10 Low altitude windshear	Not available	
system equipment		
3.11 ADS-B	The transponder TDR-94D complies with the requirements mentioned	
	in the table in section 7.29 of complementary flight manual.	
3.12 Head-up Display	Not available	

(4) Recording Equipment

Item	Information
4.1 Flight recorder	Available (L3COM)
4.2 Quick Access Recorder	Not available

Section 2: Pilot Qualification Specification

2.1 Statement and Explanation

This section is the formal notification that CAAC AEG has conducted Pilot Qualification Evaluation for EC175 series helicopter based on EASA Operation Suitability Data (OSD) process and determination for flight crew, which specifies the pilot type rating, training, checking, and currency specifications for the flight crews.

Hereby, the provisions in this section can be used, as the basis, by Chinese operators to develop their pilot qualification and training program for above Helicopters.

Alternate means of compliance to the requirements of CCAR 61, 91, 135, other than as specified in the provisions of this section, must be approved by Flight Standards Department of CAAC. If an alternate means of compliance is sought, operators will be required to show the CAAC that proposed alternate means of compliance will provide an equivalent level of safety to the provisions of this section. This may be accomplished by submitting analysis, demonstrations, proof of concept testing, differences in documentation, or other supporting evidences to the CAAC.

Find EASA Approved OSD here:

The EC175 Operational Suitability Data (OSD) Flight Crew Data (FCD) is distributed by Airbus helicopters as request and also published on Airbusworld website (TIPI).

2.2 Pilot Type Rating and Licence Endorsement

Upon the AEG evaluation, the Pilot Type Rating requirements for EC175 are listed as following:

Manufacturer	Aircraft Model	Pilot Type Rating	
Airbus Helicopters	EC175B	EC175	

License endorsement:

"EC175" is designated as the type rating of EC175. The specific helicopter model, which are listed in "Aircraft Model" column of the above table, should be identified in training and checking records.

2.3 ODR and MDR

Operator Differences Requirements (ODR) tables for EC175 series helicopters have been given as follows:

- EC175B Helionix Step 3 (candidate aircraft) versus previous Helionix configuration (base aircraft)
- EC175B Helionix Step 3.2 (candidate aircraft) versus previous Step 3 configuration (base aircraft)

Notes: Above ODR table please refer to EASA OSD-FCD document, Appendix2.

Master Differences Requirements (MDR) tables for EC175 series helicopters have been given as follows:

EC175 MDR Table

Reserved

2.4 Specification for Training

The Type Rating Training Courses proposed by Airbus Helicopters for EC175 Helicopter are included as follows and they have to be considered as the basis when developing pilot training program.

- EC175 TYPE TRAINING PROGRAM, ETS EI 025 EC175, Rev. P and as revised.

Note 1: Above training courses documents are available from Airbus Helicopters on request. Note 2: This training program includes the following courses:

- ITR 175 MP Initial ME EC175 type rating – Multi-Pilot

- ITR 175 SP Initial ME EC175 type rating – Single-Pilot.

Note3: Particular emphasis elements during training refer to the Subpart B, 5. "Training Areas of Specific Emphasis" of "EC175 Operational Suitability Data (OSD) Flight Crew Data (FCD)".

2.5 Specification for Checking

As required by CCAR Part 61 and 135 as applicable.

2.6 Specification for Currency

As required by CCAR Part 61 and 135 as applicable.

2.7 Specification for Flight Simulation Training Devices

The Flight Simulation Training Devices qualified in accordance with CCAR Part 60 are available for EC175.

Section 3: Maintenance Personnel Qualification Specification

3.1 Statement and Explanation

This section is the formal notification that the CAAC AEG has conducted Maintenance Personnel Qualification Specification (MPQS) Evaluation for EC175 series helicopter based on the documentation provided by Airbus Helicopters.

Thus, the provisions in this section can be used, as the basis, by Chinese operators to develop their maintenance personnel qualification and type training program for above helicopters.

Alternate means of compliance other than specified in the provisions of this section must be approved by Flight Standards Department of the CAAC.

3.2 Maintenance Personnel License Endorsement

Upon the AEG evaluation, the maintenance personnel license endorsement for EC175 series helicopters is listed as follows:

Manufacturer	Aircraft Model	License Endorsement
Airbus Helicopters	EC175B	EC175

License endorsement:

"EC175" is the type endorsement for above model and CCAR 147 type training certificate should show the specific model.

3.3 Specification for Training

The Maintenance Training Specification (MTS) proposed by Airbus Helicopters for EC175 helicopter is as follows, and it has to be considered as a baseline for operators and training provider in developing their maintenance training program:

 Eurocopter EC 175 Type Endorsement and Maintenance Training Specification, Issue 4 and as revised.

- *Note 1: The MTS of EC175 covers type training course, including both theoretical and practical training, as well as special emphasis items.*
- *Note 2: The MTS of EC175 also included the recurrent training course for type knowledge refresh needed to keep license validity.*
- Note 3: The supplement training needed for design change are also included in the MTS document in annex. It is the operator and training provider's responsibility to recognize the details of differences based on actual configurations; and, the supplement training may be conducted by the operator or its contracted maintenance organization.

Note 4: The above MTS document is available by request to Airbus Helicopters.

Section 4: Master Minimum Equipment List

4.1 Statement and Explanation

This section is the formal notification that CAAC AEG has conducted the evaluation of Master Minimum Equipment List (MMEL) for EC175 helicopter based on EASA approved process, and considering the following MMEL outlines the items of equipment that may be inoperative and yet maintain an acceptable level of safety by appropriate conditions and limitations.

- MASTER MINIMUM EQUIPMENT LIST "MOT" /AIRBUS HELICOPTERS/ EC 175 B

Note 1: According to EASA policy, approval of revisions to above MMEL may both by EASA directly or by Airbus Helicopters under DOA privilege.

Note 2: Above MMEL "MOT" version could be only used for those EC175B helicopters serial number defined with "MOT" configuration.

Hereby, the above MMEL and hereafter revision approved by EASA process can be used, as the basis, by those Chinese operators chosen "MOT" configuration to develop their Minimum Equipment List (MEL) for above helicopter.

Find EASA Approved MMEL:

The above MMEL distributed by Airbus Helicopters on Airbusworld website, and EASA approval reference is available by request to Airbus Helicopters.

4.2 CAAC Supplemental

Not applicable.

Section 5: Scheduled Maintenance Requirements

5.1 Statement and Explanation

This section is the formal notification that CAAC AEG has conducted Scheduled Maintenance Requirements (SMR) evaluation for EC175 helicopter based on the Maintenance Review Board Report (MRBR) for EC175 approved by the EASA.

This MRBR and the subpart of "Airworthiness Limitation" and Chapter 5 in the engine PT6C-67E Maintenance Manual, outlines the initial minimum maintenance requirements to be used in the development of an approved operator's maintenance program for the airframe systems and components.

Note 1: Airbus Helicopters also published Master Servicing Manual (MSM) which cover all scheduled maintenance tasks from MRBR.

Hereby, the MRBR and hereafter revisions approved by the EASA can be used, as the basis, by Chinese operators to develop their maintenance program for above helicopters.

Find EASA Approved MRBR:

The EC175 MRBR distributed by Airbus Helicopters on Airbusworld website,

5.2 CAAC Supplemental

Not applicable.

Section 6: Operational and Continued Airworthiness Instructions

6.1 Statement and Explanation:

This section is the formal notification that CAAC AEG has conducted evaluation of the Operational and Continued Airworthiness Instructions (OCAI) for EC175 helicopter based on the policies and procedures of Airbus Helicopters.

Hereby, the Operational and Continued Airworthiness Instructions document listed in this section were acceptable by CAAC AEG, and will give the necessary guidance for properly operating and maintaining the above helicopter within the approved operating conditions and limitations.

This acceptance may not assure the accuracy and applicability of the content in each document. It is the responsibility of the owner or operator to report any defect or discrepancy in these documents to the aircraft manufacturer or the CAAC AEG by mail box: aeg@caac.gov.cn.

Operational & Continued Airworthiness Instructions distribution:

All of Manuals are distributed by AH on Airbusworld website. The engine manufacturer distributes engine manuals directly to operators.

Manual	Reference No.	Description	Revision/Date
FLM		Flight Manual EC175B	As revised
AMM		Aircraft Maintenance Manual	As revised
SDS		System Description Section	As revised
MSM		Master service Manual	As revised
EMM	Manual Part No.	PT6C-67E Maintenance Manual	As revised
	3072872		
FIM		Fault Isolate Manual	As revised
IPC		Illustrated Parts Catalog	As revised
WDM		Wiring Diagram Manual	As revised
SRM		Structure Repair Manual	As revised
MTC		Standards Practice Manual	As revised
SIM		Simplified Index of Modifications	As revised
OCMM		online Components Maintenance Manuals	As revised

6.2 List of Operational and Continued Airworthiness Instructions

Note 1: The on-line application ORION is developed by Airbus Helicopters for technical publications.

Note 2: Airbus Helicopters using LOAP (List of Applicable Publications) provide the list of all publications for EC175, and the LOAP could be created in Airbusworld website and provide real time information of all publication.

- *Note 3:* The following documents were approved by type certification process, any modification, deviation or exemption must be approved by CAAC airworthiness department:
 - Flight Manual, FLM EC175B
 - Airworthiness Limitations Section, ALS EC175B (MSM Chap 04)
- *Note 4:* The engine manuals are developed and distributed by their manufacturers.
- *Note 5: AH provide the online Components Maintenance Manuals (OCMM) in Airbus world website. The OCMM also included a CMM for STANDARD PRACTICES by THALES, this manual presents standard practices which must be considered as a prerequisite for quality workmanship in electronic hardware supplied by THALES.*
- Note 6: In addition to the above manuals, Airbus Helicopters also provide Information Notice (IN) and Safety Information Notice (SIN), Service Bulletins(SB), Flight Operations Briefing Note (FOBN) by AH T.I.P.I website as the need arises to quickly transmit technical and operational information.

Section 7: Other Evaluation Items

7.1 Forward Observer Seat

Not applicable.

7.2 Flight Crew Sleeping Quarters

Not applicable.

7.3 Electronic Flight Bag

Not applicable.

7.4 Emergency Evacuation Demonstration

Not applicable.

Section 8: OEM Product Support Information

8.1 Flight Training

Airbus Helicopters has established, as the OEM organization, an approved flight training Center. The flight training center was certified by CAAC under approval reference: 047-FR

8.2 Maintenance Training

Airbus Helicopters has established, as the OEM organization an approved Maintenance Training Center. The training center was certified by CAAC under approval F.147.0330003

8.3 Technical Publication

Airbus Helicopters provide technical publication service by Airbus world

8.4 Maintenance Support

Airbus Helicopters has established, as the OEM maintenance organization, the approved maintenance center.

The maintenance center was certified by CAAC under approval reference: F03300171.

Appendix: CAAC AEG Team and Point of Contact

A: CAAC AEG Team for Initial Evaluation

WANG Jin	Aircraft Evaluation Division, Flight Standards Department of CAAC
<u>Li Xiaolei</u>	Chief of Maintenance, Aircraft Evaluation Center, Civil Aviation Safety &
	Technology Center of CAAC

B: Airbus Helicopters Point of Contact

Ludovic VIGNAROLI	International Certification Engineer (ICE)
LI Sheng (Jason)	Airworthiness Manager, Airbus Helicopters China